California Rodent-Borne Disease Report

Jan-March 2011

Prepared & distributed by the Vector-Borne Disease Section
Center for Infectious Diseases
California Department of Public Health

Rodent surveillance

Results of testing for serum antibody to Sin Nombre virus reported for *Peromyscus* rodents collected during January-March 2011.

	P. maniculatus			*P. eremicus*			*P. californicus*			*P. fraterculus*		
County	Pos	Tested	%	Pos	Tested	%	Pos	Tested	%	Pos	Tested	%
Riverside	0	16	0	0	75	0	0	13	0			
San Diego	4	84	4.8				0	33	0	2	83	2.4
CA total	4	100	4	0	75	0	0	46	0	2	83	2.4

Surveillance data collected & reported by the Coachella Valley Mosquito & Vector Control District, San Diego County Vector Control Program, Riverside County Vector Control, and the California Department of Public Health's Vector-Borne Disease Section and Viral & Rickettsial Diseases Laboratory.

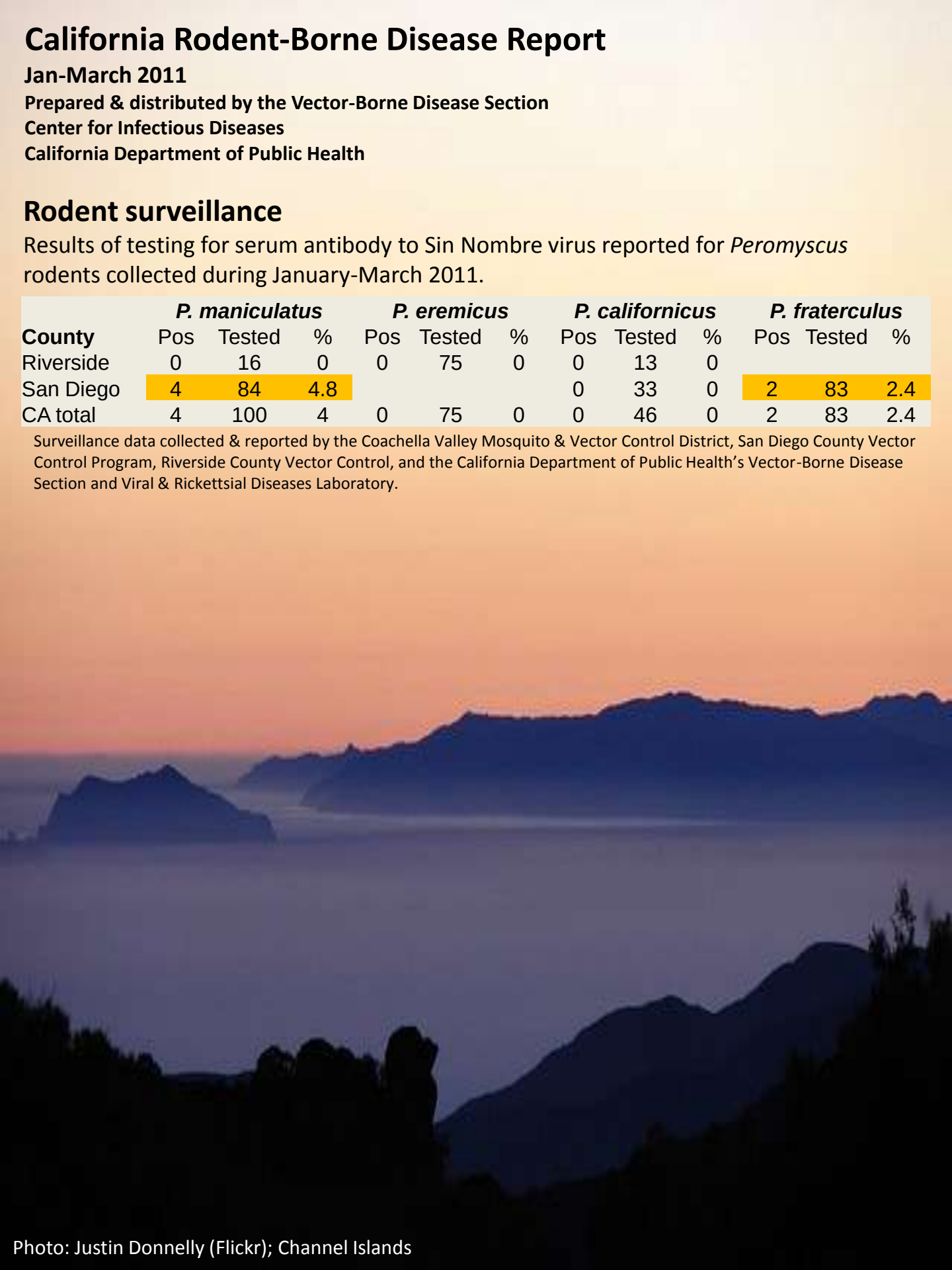

Photo: Justin Donnelly (Flickr); Channel Islands

Hantavirus Cardiopulmonary Syndrome

No cases of hantavirus cardiopulmonary syndrome were reported to CDPH in January-March, 2011.

Research news

Biogeographic and ecological regulation of disease: prevalence of Sin Nombre Virus in island mice is related to island area, precipitation, and predator richness.

JL Orrock, BF Allan & CA Drost 2011 *American Naturalist* 177:691-7.

The authors examined factors that might impact Sin Nombre antibody prevalence in 8 deer mice populations of the Channel Islands of California, using previously published data. Average annual rainfall was the strongest predictor of hantavirus prevalence (more rainfall: more hanta), presumably because rainfall influences food abundance and therefore mouse population sizes, which then result in increased rates of virus transmission. The authors also discuss the possible role of predators (e.g. snakes, hawks, owls etc.) in controlling disease risk by reducing mouse populations. More convincing evidence is perhaps needed for this line of reasoning, as hantavirus was only located on 5 of the 8 islands, and the diversity of predators was not recorded at the time of mouse sampling.

Photo: Nigel Pye.